

CLAIMS

1. A genetic data set comprising one or more nucleotide sequences which are differentially expressed in cells from inflamed tissue relative to cells from non-inflamed tissue.
2. The genetic data set of Claim 1 wherein the cells are normal mammalian bronchial epithelial cells.
3. The genetic data set of Claim 2 wherein the mammalian bronchial epithelial cells are human bronchial epithelial cells.
4. The genetic data set of Claim 1 or 2 or 3 or 4 wherein the inflamed tissue comprises tissue incubated in the presence of an interleukin molecule.
5. The genetic data set of Claim 4 wherein the interleukin molecule is IL-4 and/or IL-13.
6. The genetic data set of Claim 5 comprising a nucleotide sequence which is up-regulated in the presence of IL-4 and/or IL-13.
7. The genetic data set of Claim 6 wherein the nucleotide sequence corresponds to *aP2*.
8. The genetic data set of Claim 6 wherein the nucleotide sequence corresponds to *FABP-5*.
9. A drug target comprising a differentially expressed nucleotide sequence in cells from inflamed tissue relative to cells from non-inflamed tissue.
10. The drug target of Claim 9 wherein the cells are normal mammalian bronchial epithelial cells.

11. The drug target of Claim 10 wherein the mammalian bronchial epithelial cells are human bronchial epithelial cells.
12. The drug target of Claim 9 or 10 or 11 wherein the inflamed tissue comprises tissue incubated in the presence of an interleukin molecule.
13. The drug target of Claim 12 wherein the interleukin molecule is IL-4 and/or IL-13.
14. The drug target of Claim 13 comprising a nucleotide sequence which is up-regulated in the presence of IL-4 and/or IL-13.
15. The drug target of Claim 14 wherein the nucleotide sequence corresponds to *aP2*.
16. The drug target of Claim 14 wherein the nucleotide sequence corresponds to *FABP-5*.
17. A composition for use in the treatment or prophylaxis of an inflammatory condition in a mammal, said composition comprising a compound which:
 - (i) up-regulates a nucleotide sequence which is down-regulated in cells of inflamed tissue;
 - (ii) up-regulates activity of a protein encoded by the nucleotide sequence of (i);
 - (iii) down-regulates a nucleotide sequence which is up-regulated in cells of inflamed tissue;
 - (iv) down-regulates activity of a protein encoded by the nucleotide sequence

of (iii);

said composition further comprising one or more pharmaceutically acceptable carriers and/or diluents.

18. The composition of Claim 17 suitable for administration as an inhalant.

19. The composition of Claim 17 wherein the nucleotide sequence is up-regulated in cells exposed to IL-4 and/or IL-13.

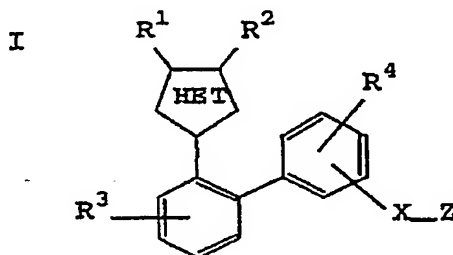
20. The composition of Claim 17 or 18 or 20 wherein the mammal is a human.

21. The composition of Claim 20 for the treatment of asthma.

22. The composition of Claim 19 or 20 or 21 wherein the nucleotide sequence corresponds to *aP2*.

23. The composition of Claim 19 or 20 or 21 wherein the nucleotide sequence corresponds to *FABP-5*.

24. The composition of Claim 22 comprising an inhibitor of *aP2* which is a heterocyclic containing biphenyl compound of Formula I:-



where:

R^1 and R^2 are the same or different and are independently selected from H, alkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, heteroarylalkyl, aralkyl, cycloheteroalkyl and cycloheteroalkylalkyl;

R^3 is selected from hydrogen, halogen, alkyl, alkenyl, alkynyl, alkoxy, cycloalkyl, cycloalkylalkyl, cycloalkenyl, alkylcarbonyl, cycloheteroalkyl, cycloheteroalkylalkyl, cycloalkenylalkyl, haloalkyl, polyhaloalkyl, cyano, nitro, hydroxy, amino, alkanoyl, alkylthio, alkylsulfonyl, alkoxycarbonyl, alkylaminocarbonyl, alkylcarbonylamino, alkylcarbonyloxy, alkylaminosulfonyl, alkylamino, dialkylamino, all optionally substituted through available carbon atoms with 1, 2, 3, 4 or S groups selected from hydrogen, halo, alkyl, polyhaloalkyl, alkoxy, haloalkoxy, polyhaloalkoxy, alkoxycarbonyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, cycloheteroalkyl, cycloheteroalkylalkyl, hydroxy, hydroxyalkyl, nitro, cyano, amino, substituted amino, alkylamino, dialkylamino, thiol, alkylthio, alkylcarbonyl, acyl, alkoxycarbonyl, aminocarbonyl, alkynylaminocarbonyl, alkylaminocarbonyl, alkenylaminocarbonyl, alkylcarbonyloxy, alkylcarbonylamino, alkoxycarbonylamino, alkylsulfonyl, aminosulfinyl, aminosulfinyl, alkylsulfinyl, sulfonamido or sulfonyl;

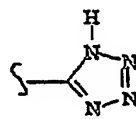
R^4 is selected from hydrogen, halogen, alkyl, alkenyl, alkynyl, alkoxy, aryl, heteroaryl, arylalkyl, heteroarylalkyl, arylalkenyl, arylalkynyl, cycloalkyl, cycloalkylalkyl, polycycloalkyl, polycycloalkylalkyl, cycloalkenyl, cycloalkynyl, alkylcarbonyl, arylcarbonyl, cycloheteroalkyl, cycloheteroalkylalkyl, cycloalkenylalkyl, polycycloalkenyl, polycycloalkenylalkyl, polycycloalkynyl, polycycloalkynylalkyl, haloalkyl, polyhaloalkyl, cyano, nitro, hydroxy, amino, alkanoyl, aroyl, alkylthio, alkylsulfonyl, arylsulfonyl, alkoxycarbonyl, aryloxycarbonyl, alkylaminocarbonyl, arylaminocarbonyl, alkylcarbonylamino, alkylcarbonyloxy, alkylaminosulfonyl, arylaminosulfonyl, alkylamino, dialkylamino, all optionally substituted through available carbon atoms with 1, 2, 3, 4 or S groups selected from hydrogen, halo, alkyl, haloalkyl, polyhaloalkyl, alkoxy, haloalkoxy, polyhaloalkoxy, alkoxycarbonyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, cycloheteroalkyl, cycloheteroalkylalkyl, aryl, heteroaryl, arylalkyl, arylcycloalkyl, arylalkenyl, arylalkynyl, aryloxy, aryloxyalkyl, arylalkoxy, arylazo, heteroaryloxy, heteroarylalkyl, heteroarylalkenyl, heteroaryloxy, hydroxy,

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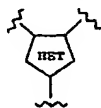
hydroxyalkyl, nitro, cyano, amino, substituted amino, alkylamino, dialkylamino, thiol, alkylthio, arylthio, heteroarylthio, arylthioalkyl, alkylcarbonyl, arylcarbonyl, acyl, arylaminocarbonyl, alkoxycarbonyl, aminocarbonyl, alkynylaminocarbonyl, alkylaminocarbonyl, alkenylaminocarbonyl, alkylcarbonyloxy, arylcarbonyloxy, alkylcarbonylamino, arylcarbonylamino, alkoxycarbonylamino, arylsulfinyl, arylsulfinylalkyl, arylsulfonyl, alkylsulfonyl, aminosulfinyl, aminosulfonyl, arylsulfonylamino, heteroarylcarbonylamino, heteroarylsulfinyl, heteroarylthio, heteroarylsulfonyl, alkylsulfonyl, sulfonamido or sulfonyl;

X is a bond or a linker group selected from $(CH_2)_n$, $O(CH_2)_n$, $S(CH_2)_n$, $NHCO$, $CH=CH$, cycloalkylene or $N(R^5)(CH_2)_n$, (where $n = 0-5$ and R^5 is H, alkyl, or alkanoyl);

Z is CO_2H or tetrazole of the formula



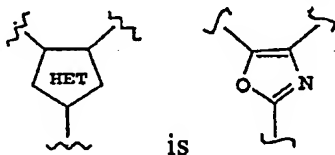
or its tautomer; and



the group represents a heterocyclic group (including heteroaryl and cycloheteroalkyl groups) preferably containing 5-members within the ring and containing preferably 1-3 heteroatoms within the ring, and which may further optionally include one or two substituents which are alkyl, alkenyl, hydroxyalkyl, keto, carboxyalkyl, carboxy, cycloalkyl, alkoxy, formyl, alkanoyl, alkoxyalkyl or alkoxy-carboxyl;

with the provisos that:

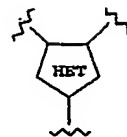
(1) $n \neq 0$ when Z is CO_2H and X is $O(CH_2)_n$, $S(CH_2)_n$ or $N(R^5)(CH_2)_n$; and

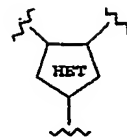


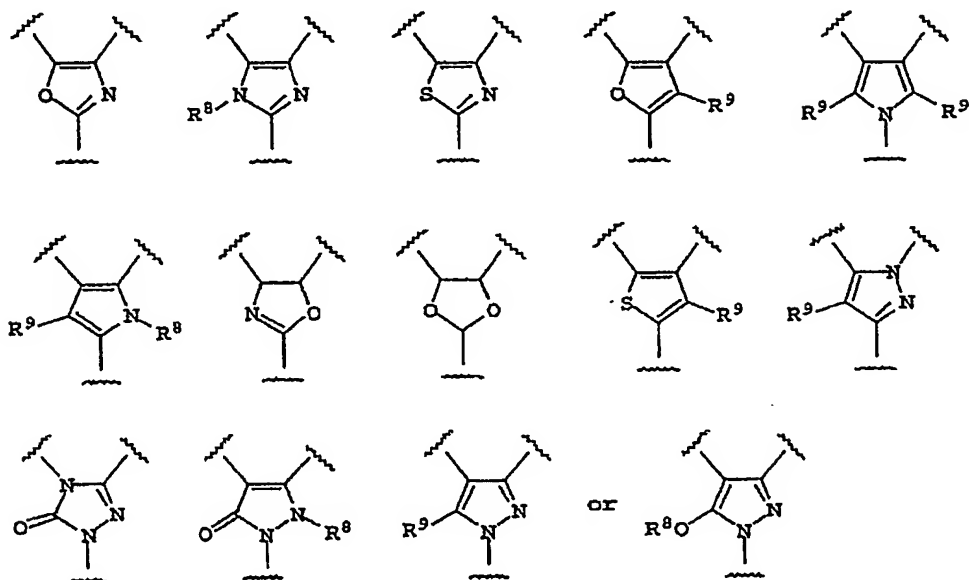
(2) when is , then X-Z may not be O-lower alkylene- CO_2H or -O-lower alkylene- CO_2 alkyl when R^1 and R^2 are both aryl or substituted aryl and R^3 and R^4 are each hydrogen;

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or a stereoisomers of said compound.



25. The composition of Claim 24 wherein the group  comprises a heteroaryl group and a cycloheterocalkyl group comprising:-



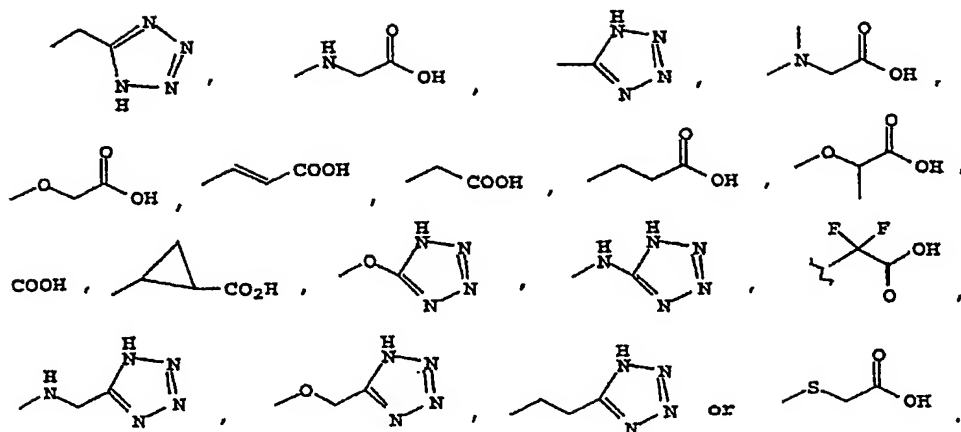
where:

R^8 is selected from H, alkyl, haloalkyl, hydroxyalkyl, alkoxyalkyl, or alkenyl, and

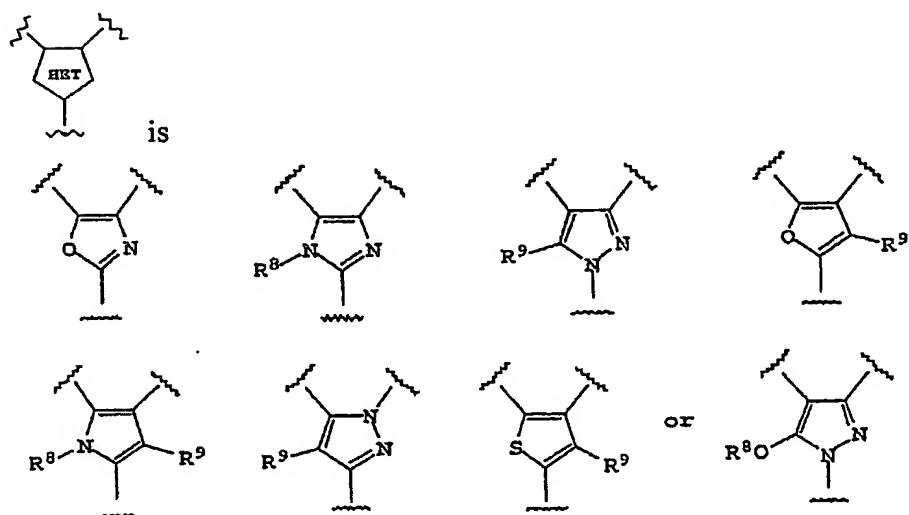
R^9 and $R^{9'}$ are the same or different and are selected independently from H, alkyl, alkoxy, alkenyl, formyl, CO_2H , CO_2 (lower alkyl), hydroxyalkyl, alkoxyalkyl, $CO(alkyl)$, carboxylalkyl, haloalkyl, alkenyl or cycloalkyl.

26. The composition of Claim 24 or 25 wherein R^8 , R^9 and $R^{9'}$ groups, alkyl by itself or as part of another group comprising 1 to 6 carbons.

27. The composition of Claim 24 or 25 or 26 wherein X-Z moieties comprise:-



28. The composition of Claim 24 or 25 or 26 or 27 wherein:-



R^8 is hydrogen, alkyl, fluoroalkyl or alkoxyalkyl, and where R^9 is hydrogen, alkyl, fluoroalkyl, alkoxy or hydroxyalkyl;

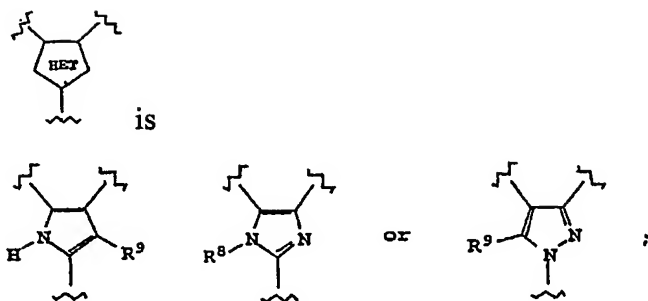
R¹ and R² are each phenyl, substituted phenyl or cycloalkyl;

R³ and R⁴ are the same or different are independently selected from H, halo, alkyl or alkoxy; X is OCH₂, NHCH₂, CH₂ or CH₂CH₂; and

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Z is CO₂H or tetrazole.

29. The composition of any one of Claims 24 to 28 wherein:-



wherein:

R⁸ is hydrogen, alkyl or fluoroalkyl);

R⁹ is hydrogen, alkyl, fluoroalkyl or alkoxy;

R¹ and R² are each phenyl;

R³ and R⁴ are each H; X is OCH₂, CH₂ or NHCH₂; and

Z is CO₂H or tetrazole.

30. A method for the treatment and/or prophylaxis of an inflammatory condition in a mammal, said method comprising administering to said mammal an effective amount of a composition according to any one of Claims 17 to 29.

31. The method of Claim 30 wherein the mammal is a human.

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32. The method of Claim 31 wherein the inflammatory condition is asthma.

33. The method of Claim 30 to 31 or 32 wherein aP2 and FABP5 are simultaneously down-regulated.

34. Use of a compound which:

- (i) up-regulates a nucleotide sequence which is down-regulated in cells of inflamed tissue;
- (ii) up-regulates activity of a protein encoded by the nucleotide sequence of (i);
- (iii) down-regulates a nucleotide sequence which is up-regulated in cells of inflamed tissue;
- (iv) down-regulates activity of a protein encoded by the nucleotide sequence of (iii);

in the manufacture of a medicament for the treatment and/or prophylaxis of an inflammatory condition.

35. Use of Claim 33 wherein the inflammatory condition is asthma.

36. A method for the diagnosis of an inflammatory condition, a propensity for development of an inflammatory condition or for monitoring the efficacy of a therapeutic protocol, said method comprising determining the pattern of expression of a genetic data set as defined in any one of Claims 1 to 8 or the pattern of presence or absence of a product of the genetic data set as defined in any one of Claims 1 to 8.

37.

The method of Claim 35 wherein the inflammatory condition is asthma.

38. The method of Claim 35 or 36 wherein the pattern of expression or pattern of presence or absence of a product is relative to mammalian bronchial cells under non-inflamed conditions.